

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

<b>In the Matter of</b>	)	
	)	
<b>Amendment of the Amateur Service Rules</b>	)	<b>WT Docket No. 12-283</b>
<b>Governing Qualifying Examination Systems</b>	)	
<b>and Other Matters</b>	)	
	)	
<b>Amendment of Part 97 of the</b>	)	<b>RM-11629</b>
<b>Commission's Amateur Service Rules to</b>	)	
<b>Give Permanent Credit for</b>	)	
<b>Examination Elements Passed</b>	)	
	)	
<b>Amendment of Part 97 of the</b>	)	<b>RM-11625</b>
<b>Commission's Rules to Facilitate Use in</b>	)	
<b>the Amateur Radio Service of Single Slot</b>	)	
<b>Time Division Multiple Access</b>	)	
<b>Telephony and Data Emissions</b>	)	
	)	
<b>Request for Temporary Waiver</b>	)	
	)	
<b>Amendment of the Amateur Service Rules</b>	)	<b>WT Docket No. 09-209</b>
<b>Governing Vanity and Club Station Call</b>	)	
<b>Signs</b>	)	

**To the Commission:**

**Comments of Nickolaus E. Leggett, N3NL**

I am a certified electronics technician (ISCET and iNARTE) and an Extra Class amateur radio operator (call sign N3NL). I hold an FCC General Radiotelephone Operator License with a Ship Radar Endorsement. I am an inventor holding three U.S. Patents. My latest patent is a wireless bus for digital devices and computers (U.S. Patent # 6,771,935). I have a Master of Arts degree in Political Science from the Johns Hopkins University.

I am one of the original petitioners for the establishment of the Low Power FM (LPFM) radio broadcasting service (RM-9208 July 7, 1997 subsequently included in MM Docket 99-25). I am also one of the petitioners in the docket to establish a low power radio service on the AM broadcast band (RM-11287). I have filed a total of over 200 formal comments with the FCC over the years since the 1970s. I have filed comments with other Federal agencies as well including the USPTO, FAA, EPA, and the TSA.

### **My Comments**

I am commenting on several of the issues raised in these dockets. Each of my comments references the applicable paragraph numbers in the Notice of Proposed Rule Making and Order.

### **Number of VEs**

I prefer the current practice of having a team of three volunteer examiners (VEs) (Paragraph 18). This type of team is well suited to run an orderly and well supervised examination system. However, I am a city resident where it is relatively easy to collect a team of three VEs. There are many areas of the United States where the population density is low. As a result of this, there is a strong argument for a minimum team of two properly credentialed VEs. This approach also is compatible with my suggestion on remote testing that is presented below.

### **Remote Testing**

I support to a limited degree the idea of remote testing where a volunteer examiner (VE) supervises an examination by electronic means (Paragraph 22). This approach can be quite useful in less accessible locations such as Alaskan towns, Arctic and Antarctic bases, certain military bases etc. These remote sessions should include the use of an audio and video system that allows the distant examiner to supervise the session.

However, there should be a second VE present in person at the test session. This second VE compensates for the fact that the electronic system provides only tunnel vision and limited coverage of the examination session. The second examiner has a full view of the examination room, checks the identification of the applicants, and takes possession of the examination papers after the session is completed.

This system requires two examiners for the examination session, but one of the examiners can be present by means of a modern audio and video communications system.

### **Emission Types**

The Commission asks for comments on any other specific emission types that should be permitted (Paragraph 28). In this regard, the Commission should consider the creation of a sub-band on an amateur radio band where any type of emission is allowed. This regulatory feature would allow any licensed amateur radio operator who is an inventor to test his or her new radio invention on the air. All of the amateur operators using this exploratory sub-band would be required to identify every ten minutes by sending their call signs and a 50-character or less description of their experimental communications. This extended identification would be transmitted by Morse code, Single Side Band voice, or radio teletype.

Having a completely open emission type would significantly encourage innovative approaches to radio and new ham radio inventions. In my own case, I would be interested in experimenting with a filtered spark gap transmitter. This experimental transmitter would be an electromechanical device which would potentially be highly resistant to damage from electromagnetic pulse (EMP) events and attacks. This potentially life-saving technology cannot be accommodated under the current rules for the amateur radio service. However, it can be constructively accommodated on an exploratory sub-band.

Other experimenters and inventors would be able to work with new types of digital emissions as well as hybrid analog-digital communications modes. The exploratory sub-band system would accommodate new inventions that we do not understand right now. It is an open environment for such invention and development.

**Respectfully submitted,**

**Nickolaus E. Leggett, N3NL Amateur Radio Extra Class  
Analyst and Inventor  
1432 Northgate Square, #2A  
Reston, VA 20190-3748  
(703) 709-0752**

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